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HIGH TECHNOLOGY TERRORISM AND SURROGATE WAR: THE
IMPACT OF NEW TECHNOLOGY ON LOW-LEVEL VIOLENCE

Brian Michael Jenkins

RAND Corporation
Santa Monica, California

January 1975

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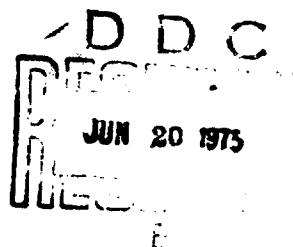
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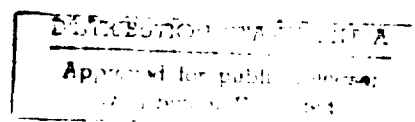
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HIGH TECHNOLOGY TERRORISM AND SURROGATE WAR:
THE IMPACT OF NEW TECHNOLOGY
ON LOW-LEVEL VIOLENCE

Brian Michael Jenkins

The Rand Corporation, Santa Monica, California

Several questions occurred to me when I first began to think about the impact of technological developments on low-level violence. For example, how has new technology changed rural or urban guerrilla warfare? What kinds of new military technology have the struggles in Northern Ireland, Southeast Asia, or Latin America produced? What kinds of weapons are Palestinian commandos or IRA Provisionals now using? What kinds of technology are being developed to counter the activities of guerrillas and terrorists?

But instead of dissecting the inner workings of a letter-bomb or cataloging the new surveillance and detection devices that have been developed to locate phantom guerrillas in jungles or skyscrapers, or find hidden explosives, I decided to examine the topic in somewhat broader terms, looking at current trends in technology, both military and civilian, what they could mean in the long run to guerrillas and terrorists, and also what they could mean for the rest of us.

In the following paper, I would like to develop two independent but complementary ideas about the war in the future. First, I will argue that due largely to technological developments -- the development of new weapons and the creation of new vulnerabilities in a society that is increasingly complex and dependent on fragile technology -- modern

guerrilla and terrorist groups are being afforded a growing capacity for disruption and destruction. Second, I will argue that what we now call modern conventional war, the kind that is declared and openly fought, is becoming obsolete for a variety of reasons. The decreasing profit of modern conventional warfare as an instrument of political pressure may persuade some nations to adopt terrorist groups or terrorist tactics as a means of surrogate warfare against another nation. The support of terrorists by any nation or group of nations in turn will further increase the terrorists' capacity for violence. It may also prevent effective international cooperation aimed at controlling international terrorism.

The balance of military power, defined in this instance simply as the capacity to inflict damage, will shift away from armies toward smaller armed groups that do not necessarily represent or confine their activities to any particular nation. National governments, of course, will retain a clear superiority in conventional military power, but will lose their monopoly over the means of large-scale violence as smaller groups gain more destructive power, which they can use in ways that make conventional military power of little utility. Modern terrorists have already demonstrated that small groups with a limited capacity for violence can achieve disproportionately large effects in the world. They have attracted worldwide attention to themselves and to their causes; they have caused worldwide alarm; they have compelled governments with a clear preponderance of conventional military power to negotiate with them, to grant them concessions, and to exert pressure on other governments to grant concessions.

The technological developments which are taking place now both in military weaponry and in civilian society, will have important military and political consequences. Their effect may be as profound as that created by the introduction of nuclear and strategic weapons a generation

ago. As numerous small groups acquire an increasing capacity for major violence, warfare may be redefined and the rules of warfare modified. Our present concepts of security and defense may have to be altered. Armies, as we know them now, could become increasingly irrelevant as providers of national security. In the political realm, national governments threatened by increasingly violent terrorists may collectively turn to authoritarian measures as they seek to preserve domestic and international order. Some countries may not be able to satisfy or pacify dissident minorities and will come apart. The present system of international order based on a community of national governments may itself be jeopardized. The concept of nationhood itself could be altered.

This vision of the future is not meant to be alarmist or apocalyptic. The world is not likely to collapse into terrorist anarchy any more than it is likely to end in a single nuclear holocaust. Conventional wars are likely to remain at least the primary mode of armed conflict between nations. Conventional armies will be maintained. Conventional wars probably will produce more casualties than all the world's terrorists put together. The kind of war that is now waged by terrorists will not replace conventional war as waged by armies. Terrorist violence will coexist with conventional war, but it probably will become more destructive, and therefore will become more important.

THE LONG MARCH TO LOI

While terrorism itself is not a new concept, the kind of terrorism we see today is a derivative of twentieth century theories of guerrilla warfare. Mao Tse-tung deserves the most credit for developing the modern theory of guerrilla warfare. He gave a coherent theory to what had been until then a set of military tactics employed by groups who lacked

armies. In doing so, Mao formulated a series of relationships that differed from existing military strategies and earlier Marxist theories of revolution. He differed from the earlier Marxists in placing greater emphasis on military power. Political power depends on military power, or, as Mao put it, "political power grows out of the barrel of a gun." But Mao also recognized that his forces were at the outset numerically and technologically inferior to those of his opponent, and so also substituted political power for a *lack* of conventional military power. Guerrillas, because of their superior political motivation, strengthened by the political support of the Chinese peasants, Mao reasoned, could survive military reverses and wage a protracted military campaign to wear down their opponents.

Mao's concept of people's war freed strategists from thinking about warfare exclusively in terms of more soldiers and better armaments, and it allowed determined revolutionaries who lacked conventional military power to take on militarily superior forces with some hope of ultimately defeating them. In saying that guerrillas aimed for and depended upon the political mobilization of people who would be mere bystanders in a conventional military conflict, Mao introduced a relationship between military action and the attitude and response of the audience. This added a new dimension to conflict, which until then had measured achievement primarily in terms of the physical effect that any military action had on the enemy. Now it was being said that the effect that any violent action has on the people watching may be independent of, and may equal or even exceed in importance the actual physical damage inflicted on the foe. Terrorism is that proposition pursued to its most violent extreme.

Terrorism is violence for effect -- not primarily, and sometimes not at all for the physical effect on the actual target, but rather for its dramatic impact on an audience. Developments in world communications, particularly in the news media, have expanded the potential audience to

national and, more recently, to international proportions. By means of dramatic acts of violence, guerrillas can gain worldwide attention, and mobilize national and international support for their struggle. The relationship between actor and audience can be reciprocal. Radio and especially television allowed an expanding audience to "participate" vicariously in the guerrillas' struggle. Through the mass media, guerrillas could arouse, frighten, evoke sympathy, even create a bond with a distant audience. And the reactions of this audience could affect the outcome of the struggle. It is an idea that owes as much to Marshall McLuhan as it does to Mao Tse-tung.

Orthodox Marxists were willing to condone the massive use of terror to protect the revolution they achieved in Russia, but tended to be wary of sole reliance on military power, and especially of reliance on terrorism, to foment revolutions. Indeed, they still are. The early Maoists attached greater importance to the role of military power, but said little about the use of terrorist tactics. It is not in Marxist theory of revolution, Russian or Chinese, that a theory of antigovernment terrorism arises. It is in the postwar Jewish struggle in Palestine, and in the guerrilla campaigns against the colonial powers, that we first find campaigns of deliberate terrorism.*

Colonial insurgents defined colonialism itself as "violence in its natural state, and thus the only possible means of ending it was by greater violence."** (Some Marxists have used an idea similar to this to justify revolutionary terrorism, claiming that the existence of economic or social injustice was in itself a form of terrorism and that those who exploited the people, maintained order, or protected the government were on these grounds the original terrorists.) Greater violence was not

* For a more thorough discussion of modern terrorism, see the author's *International Terrorism: A New Mode of Conflict*, Santa Monica, California: California Arms Control and Foreign Policy Seminar, forthcoming.

** Frantz Fanon, *The Wretched of the Earth*, New York: Grove Press, 1963.

only justified by the colonial insurgents, but the legitimate targets of violence were potentially broadened to include the entire colonial machinery: government officials whether high-ranking dignitaries or minor bureaucrats, whether civilian or military, policemen, plantation owners, colons, indigenous collaborators, just about anybody who participated in the colonial structure; which in its extreme could mean anybody who did not actively participate in the struggle to overthrow the colonial ruler. This narrowing of the category of innocent bystanders, who are theoretically immune from deliberate military attack under the traditional rules of warfare, paralleled the development of the twentieth century concept of total war. In World War II, for example, cities, factories, workers, anything connected with the enemy's "war machine" -- and given the indiscriminate nature of modern destructive weapons, a good many bystanders, as well -- were attacked. The fine line which divides total war from terrorism is that in the latter, bystanders are hit not by predictable accident, but often deliberately, in order to achieve greater shock effect.

The struggles for political independence were unique in the sense that colonialism after World War II was regarded as anachronistic and inherently immoral, not only by the colonial subjects, but also by many people in the ruling nations, and by a number of influential non-colonial governments, particularly the United States and the Soviet Union. As newly independent nations entered the United Nations, this attitude came to constitute the majority view in that forum. Public opinion at home plus that of the international community inhibited the governments of colonial nations from responding to insurgent violence with the even greater violence that they were militarily capable of inflicting. The harsh measures that had often been used to conquer and pacify distant subjects in the nineteenth century were simply unacceptable in the second half of the twentieth century.

Under these circumstances, the political mobilization and party organization considered necessary by the early Marxists, or the protracted

military campaign described by Mao, were not prerequisites to achieving independence. In the wake of the First Indochina War and the bitter struggles in Indonesia and Algeria, colonial governments were anxious to avoid the military costs, the potential military disasters, the inevitable domestic political divisiveness, and condemnation by the international community that a protracted and debilitating military campaign against guerrillas in a distant colony could bring. The mere threat of such a struggle could often persuade colonial governments to retire gracefully. Colonial insurgents found terrorism to be an effective means of broadcasting their opposition to continued colonial rule, of embarrassing the colonial government, of gaining instantaneous worldwide attention, sympathy, and support, which in turn could be translated into international pressure on the colonial government, and of forewarning the colonial government of the kind of struggle it would face if it chose to resist.

Whether or not they realized it at the time, these colonial freedom fighters had developed the relationship between violent action and the audience to the point that they nearly deleted from the equation the military capabilities of their opponents. They could play to the audience, undertake acts of violence which were in themselves militarily insignificant but were designed to gain worldwide attention, then count on domestic political pressure and international pressure on the colonial government to help them achieve what they might not have been able to achieve militarily by themselves, namely, bring about the withdrawal of the opponent's army.

Guerrillas fought elsewhere in the world for causes other than independence from colonial rule but outside of Cuba few guerrillas fighting against an indigenous government were able to repeat the success of colonial freedom fighters. Colonial governments, despite their military superiority, had obvious psychological and political disadvantages, which indigenous governments did not. Moreover, withdrawal from colonies

did not entail dismantling the government at home. Revolutionary guerrillas who took on indigenous governments found them far less willing to relinquish their power. Their frustration was especially keen in Latin America where, in the decade following the Cuban revolution, the numerous rural guerrillas who had hoped to emulate the success of Fidel Castro had in fact not managed to advance beyond the remote mountain tops and jungles where they had initiated their struggles. In frustration, they turned to the cities where they could carry the struggle directly to the seat of government, and in the process gain national and international attention. It was an objective for which terrorist tactics were ideally suited.

Urban guerrilla warfare thus provides an important developmental link between earlier theories of revolution and guerrilla warfare and today's international terrorism. Urban guerrillas deliberately sought national and international attention by dramatic acts of violence. They assassinated or kidnapped government officials, businessmen, and foreign diplomats. They staged spectacular bank robberies, set off bombs, and hijacked airliners. Other dissident groups quickly adopted these tactics, and went one step further by carrying their struggle to individuals and countries not directly involved in the conflict. Terrorism became truly international.

International terrorism is thus an offshoot, the newest branch in the evolution of modern revolutionary and guerrilla warfare theories. It elevates individual acts of violence to the level of strategy (and therefore is denounced by orthodox Marxists as adventurism). It denigrates conventional military power by substituting dramatic violence played for the people watching. It violates the conventional rules of engagement: it reduces the category of innocent bystanders to the point that there are no innocent bystanders. It makes the world its battlefield: it recognizes no boundaries to the conflict, no neutral nations.

HIGH TECHNOLOGY TERRORISM

The development of international terrorism has depended upon certain technological developments which have taken place in the past half century. Up to now, guerrillas and terrorists have been more imaginative in their tactics than most armies, and innovative to a degree that their clear military inferiority encourages creative thinking, but they have been technically crude. Their weapons have been limited for the most part to submachine guns and dynamite. Their successes in gaining their objectives are less the result of their own military capabilities than of new vulnerabilities in the society at large.

Modern technology has benefited terrorists most in providing them with almost instantaneous worldwide notoriety and attention through contemporary news reporting. International terrorism in large measure depends on, and is enhanced by, the capacity of the media to reach a worldwide audience. The extensive news coverage given to terrorist attacks satisfies the terrorists' aim of propagandizing their cause and it also results in a greatly exaggerated impression of the amount of violence that has occurred. Up to now, the actual toll of terrorists' actions, in lives lost, in personal injuries and in property damage has been small when measured against the world volume of violence. In the next ten to twenty years that is likely to change. Low-level violence, as contrasted with the high-level violence of modern conventional or nuclear war, is going to escalate. We are going to see some high technology terrorism, made possible by new vulnerabilities and new weapons.

New technologies create new vulnerabilities. Civil aviation is a perfect example. It is now possible to travel conveniently to almost anywhere in the world in a matter of hours. It is also possible for a single armed man to hijack a 747 jumbo jet and hold 300 passengers hostage at 37,000 feet. Our energy systems are fragile. Supertankers, natural gas pipelines, the transportation system for liquefied natural gas, offshore oil platforms, all seem especially vulnerable to physical attacks and deliberate disruption. Burning tank cars carrying lethal

cnemicals have already forced the evacuation of population centers several times. These fires were accidents, but their consequences would not be any different if they had been deliberately set. Recently a great deal of public attention has centered on the potential terrorist threat to nuclear power programs and nuclear weapons.

Nuclear power facilities will probably proliferate in the next few decades. The traffic in fissionable material and radioactive waste material will increase. The growth of civilian nuclear programs, plus the atomic weapons which we have stored around the world in vulnerable bunkers, raises a number of new possibilities for mass hostage situations and political extortion on a grand scale. There are, of course, nonnuclear alternatives for terrorists -- cheaper, less dangerous ways to free political prisoners or to get a few million dollars than seizing an atomic reactor or attempting to build an atomic bomb. In most countries, terrorists need only seize an embassy or hijack an airliner. But, given the basic theory of terrorism -- violence to gain attention, instill fear, and thereby gain political leverage -- nuclear blackmail would seem to be, at least in theory, extremely attractive to terrorists.

People tend to be frightened by the mere mention of the word "atomic," whether it is intended for peaceful purposes or already in the form of weapons. It is the most potent, and to the general public, the most sinister force available to mankind. To create an atmosphere of alarm, terrorists using any sort of nuclear blackmail would have much of their mission accomplished in advance. A plausible nuclear threat would instantly provide them with a tremendous amount of publicity and considerable political leverage. To anyone faced with nuclear blackmail by terrorists, it might make very little difference whether scientists unanimously and publicly agreed that the probability that the terrorists actually could or would blow up a city was quite low. Who is going to believe them? Who would be willing to run the test? Even if the terrorists ultimately failed to carry out the threatened deed, the publicity they would gain would be tremendous.

The feasibility of a terrorist-posed nuclear threat is currently an issue of heated debate. Feasibility, of course, depends on what kind of nuclear threat one is talking about. It may be possible for a determined, well-trained group to steal a single tactical nuclear weapon from a storage site, although it would be technically difficult to successfully detonate one. But it may not be necessary to steal an atomic war head to carry out nuclear blackmail. Some experts tell us that with sufficient technical skill, terrorists could also steal enough fissionable material and manufacture their own crude atomic bomb.* People with the necessary technical skill are said to number in the tens of thousands, and can be found at research facilities in a number of countries. The possession of radioactive waste material and its threatened use as a contaminant could also constitute a serious danger to public safety. Seizure of a nuclear reactor might bring the terrorists nothing more than a lot of publicity; they would not be able to turn it into a bomb; but even their threat to damage an expensive facility worth billions, or perhaps cause widespread panic might still place them in a powerful bargaining position.

Are terrorists likely to employ nuclear blackmail? After all, had they wanted to, terrorists could already have done a number of things which could produce widespread casualties. Apart from the technical difficulties involved, which are less than those involved in putting together an atomic bomb, why haven't terrorists threatened to contaminate a city's water supply? Certainly there must be some constraints, other than technical ones, against killing thousands. There are, of course: to begin with, moral ones. Despite the popular view of them, terrorists, for the most part, are not wanton killers. There are also practical arguments against mass murder. Killing a lot of people is seldom an objective of terrorism. High body counts do not necessarily further their objectives, and can provoke a damaging backlash. Moreover, such tactics are not very discriminating. Neither, of course, were the three

* Books and articles forewarning or describing the potential terrorist threat to nuclear weapons or possibility of terrorists manufacturing their own nuclear weapons are legion. Among the most useful are Theodore B. Taylor and Mason Willrich, *Nuclear Theft: Risks and Safeguards*, N.Y.: Ballinger 1974; R. B. Leachman (ed.), *Preventing Nuclear Theft: Guidelines for Industry and Government*, N.Y.: Praeger Publishers, 1972; AEC Study Group, *Special Safeguards Study* (also referred to as the "Rosenbaum Report"), April 1974.

Japanese terrorists who machine-gunned passengers at Lod airport in Israel, but we must remember that the idea of deliberately indiscriminate murder carried out in order to gain worldwide attention, along with the practice of going abroad to strike targets, are both relatively recent innovations. Most terrorists have operated on their own territory and have had to take some care not to totally alienate the local population. Indiscriminate violence can be dangerous, especially if you have to live among your victims. These constraints, however, do not preclude the possibility of a large-scale Lod by foreign terrorists or by local lunatics, and they do not preclude terrorists from attempting to threaten -- as opposed to wanting to kill -- a lot of people.

The creation of new vulnerabilities has been matched by the development of new weapons. We should first note that most of the major technological advances in warfare in the past half century have been in the areas of large weapons -- tanks, artillery, aircraft, missiles, nuclear warheads, and in weapon guidance systems -- radar, television, computers, lasers. The individual weapons of the infantryman have changed little. The modern foot soldier goes into battle armed with a semiautomatic or automatic rifle, perhaps a pistol, and some hand grenades. None of these weapons has changed much since World War II. Many of them have been in use for fifty or sixty years. Until quite recently, there have been few dramatic developments in personal weapons to parallel those made in larger weapon systems. Now that is changing. The curve of the individual soldier's capacity for destruction is zooming upward, propelled by the military research and development programs which are currently supported by the national governments of the industrially advanced countries, ironically those who will be most vulnerable if some of the weapons now being developed come into the hands of dissident groups willing to employ violence.

Individual weapons are now beginning to take some significant strides. The most important development from the viewpoint of guerilla and terrorist groups is that major weapons and guidance systems are being miniaturized to the point where they can be carried and operated by one man with little training. As a result, we are now creating a new range of small, portable, cheap, relatively easy to operate, highly accurate, and highly destructive weapons which, when produced on a large scale for armies, will undoubtedly find their way into the hands of terrorists. Some of them already have.

One need only scan the defense journals to get an idea of the kinds of weapons that will be available to tomorrow's infantryman, and to terrorists and guerrillas the day after tomorrow. Weapons such as the U.S.-manufactured "Redeye" or the Soviet-built SA-7 or "Strela" will become increasingly available. Arab terrorists have been caught with SA-7s outside the Rome airport. Both "Redeye" and the "Strela" are shoulder-fired, antiaircraft missiles guided to their target by an infrared sensing device which homes in on the heat of a low-flying aircraft's engines. "Redeye" weighs under 30 pounds and is only about four feet long. It is already being replaced by "Stinger" which has a greater range and velocity and an improved infrared device giving it greater accuracy, but without any increase in size or weight.

The British have their own man-portable surface-to-air (or surface) missile called "Blowpipe." Instead of an infrared heat-seeking device, the small supersonic missile is guided by radio commands sent to it by its aimer. There is also the Swedish-built low-level, surface-to-air missile, the RB-70, which fires a supersonic missile kept on target by a laser beam guidance system that is reported to be virtually unjammable. It weighs under 180 pounds, breaks down into three smaller packages, and can be operated by one man with minimal training. As opposed to "Redeye" or "Strela," in which a heat-seeking missile flies up the exhaust pipe of the aircraft, the "Blowpipe" and the Swedish RB-70 can be fired head-on toward an approaching plane.

A number of man-portable antitank weapons employing sophisticated guidance systems have also been developed. The Soviet-built "Sagger," a wire-guided antitank missile, was used extensively in the "October War" in the Middle East. It is normally mounted in sixes on an armored car but it is not a large weapon, and one could be rigged to fire from some other platform. There are several Western counterparts to "Sagger," including the U.S. "Dragon," a wire-guided antitank missile. Weighing under 30 pounds, it can be carried and operated by one man. There is also the U.S. "Tow," the French/German "Hot," and the British "Swing-fire." The French/German "Milan" is a smaller antitank weapon with a semiautomatic guidance system. It also can easily be carried and operated by one man. It is now being deployed by the West German army which expects to have 11,000 "Milan" missiles by 1977, and eventually 1200 launchers with 50,000 missiles.

A Belgian arms manufacturing firm has meanwhile developed a disposable, lightweight, silent mortar which can be used against personnel and also fires a projectile with a spherical warhead designed to produce a "shattering effect" suitable for the "destruction of utilities, communications, and light structures." The full field unit, which weighs only 22 pounds, includes the firing tube plus seven rounds. All seven rounds can be put in the air before the first round hits.

The increasing urbanization of Europe and the expectation that armies may have to do more of their fighting in cities has led to the creation of weapons designed for urban warfare which will also be ideal for use by urban guerrillas. Among these is the German-designed "Armbrust 300," an antitank weapon that has no backblast, making it possible to fire the weapon from inside a room -- something no rocket launcher can do now. The Germans expect to produce the "Armbrust" in large quantities. Several firms are also manufacturing tiny -- some less than 15 inches long -- silent submachine guns.

There have also been important developments in propellants and explosives. A new projectile which can be fired from the existing U.S.

M-79 grenade launcher, is capable of penetrating two inches of armor plate and igniting any fuel behind it. Mines smaller than a man's hand are available. Miniaturized detonating devices have made thin letter bombs possible. Nonmilitary developments such as day-date calendar watches, digital clocks, and long-lasting power cells have increased the possible time delays in setting off time bombs.

These weapons were designed for use against specific military targets, not for terrorists. The antitank weapons, for example, have the capability to penetrate thick armor but would not do as much explosive damage when fired against a building as, say, dynamite. Bullets are adequate to kill a man. Assassinations can be carried out with submachine guns or high-powered rifles. Since dynamite and machine guns are widely available and easier to get than the more advanced weapons, it is fair to ask why terrorists would be interested in acquiring such weaponry and, if they were, would they be able to do so.

In answer to the first part of that question, we should understand that guerrillas and terrorists now operate with the best individual weapons they can get their hands on. The fact that they now have to rely mainly on pistols and submachine guns, and rocket-propelled grenade launchers, is not evidence that they would not prefer to use something more advanced. Terrorists, those who actually do the shooting, often tend to be gun freaks or explosives freaks. It must be far more exhilarating to fire a guided missile and hit something than to fire a rifle. Terrorists may want the added firepower for its own sake, simply because it is advanced technology, regardless of its utility to them in all circumstances. They may acquire the weapons first, then think of the targets.

We should also understand that the military specifications of a hand-held antitank or an antiaircraft weapon may not be the same characteristics the terrorists are after. To reiterate, terrorism is violence for dramatic effect. The mere possession of advanced weapons, demonstrated by their use, is in itself dramatic. The dramatic effect of an explosion

in a government office building is exceeded by the dramatic effect of even a small hole in the national palace when that hole has been made by a sophisticated antitank missile, and it implies that the terrorists are a much more potent force. Finally, we must not overlook the potential utility to terrorists of easily concealable weapons that give their users great accuracy at long distances, thus increasing the chances of success while reducing the risks of capture.

Will they be able to acquire them? Obviously not as easily as they can now acquire machine guns and dynamite. Up to now, these advanced weapons would not have been available in large quantities, but if they are mass-produced and eventually widely distributed, the opportunities for diversion will inevitably increase. Sales competition among the arms manufacturers by itself may push the preceding generation of "obsolete" weapons to the international market. Arms control is difficult enough when satellites are able to photograph missile silos. It will be extraordinarily difficult, perhaps virtually impossible, to keep track of hand-held missile launchers.

A major impetus in the West for increasing the destructive power of its individual soldiers has been the numerical superiority of the Soviet and Warsaw Pact armies. Manpower is more expensive in the West. The United States and its European allies have continually sought to offset the numerical advantage of their most probable adversaries with technological superiority. That technological superiority is now being miniaturized and mass-produced to the point that every other soldier, potentially every other militiaman too, will eventually be able to kill a tank or bring down a plane.

Since the West does not consider itself the probable aggressor in any conflict with the Warsaw Pact countries, some believe that the deployment of these weapons will tend to discourage invasion and thereby stabilize the defense of Western Europe. Yet the notion that widely available, easy-to-operate, highly accurate and highly destructive yet portable weapons are going to

stabilize the defense of any country deserves critical examination. While the widespread deployment of such weapons could discourage a potential invader, it could also increase the problems of internal security, and thus destabilize Western Europe, especially if we examine the deployment of such weapons in the context of Europe's current economic problems, the resultant social unrest, and in some countries, increased internal violence.

We generally only discuss the consequences that the use of these weapons will have on the battlefield. This discussion usually proceeds in the form of rather neat pairs: net antitank weapons versus new designs in tanks, new surface-to-air missiles versus tactical aircraft, and so on. I have the feeling that we are somehow comfortable with these terms of debate. Projectiles go faster or have a higher probability of hitting and destroying their target, but the basic terms of warfare have not changed. For each item of new military technology there seems to be a countervailing military technology.

It becomes disconcerting when we remove these new weapons from the battlefield and begin to think about their potential use against nonmilitary targets: portable surface-to-air missiles versus civil aviation, precision-guided antitank weapons versus speakers' podiums, motorcades, squad cars, supertankers, nuclear reactors, or national monuments.

There is, of course, a countervailing technology here, too. New surveillance and detection devices have been developed; we are made aware of some of them every time we board an airplane. But the full application of such technology implies great social control. We have accepted such controls for brief periods to deter certain crimes like hijacking. But we do not live in airports, nor do I think we would like to. Thus, though a countervailing technology may be there, its application could be costly in terms of human liberty.

TOWARD SURROGATE WARFARE

Let me now proceed to the second idea I want to discuss. Nations have acquired far more destructive armaments than terrorists can ever hope to have unless they are in power, but at the same time that nations

have been improving their arsenals, it appears that they are finding fewer opportunities to employ them.

Modern conventional war is becoming increasingly impractical. It is too destructive. Nations entering into conventional warfare risk the most productive members of their population, their wealth through the destruction of resources like industry and cities, the semi-permanent alteration of their landscape.

For most nations, modern conventional warfare is also too expensive. Few nations can afford modern sophisticated armaments. Most of them must rely on external backers for funds and materiel. But dependence on foreign support imposes constraints: The backers are likely to be superpowers who are likely to be on opposite sides. If a local war escalates, there is the danger that the backers themselves will come close to a direct confrontation, as we saw in the 1973 war in the Middle East. In that event, before risking a nuclear war which neither wants, they are likely to constrain their proteges, cutting off their supplies, if necessary.

World opinion imposes further constraints on a nation entering war. War is no longer regarded by the world community as a legitimate means of exerting political pressure. Warring nations can ignore world opinion up to a point, but when that point is reached -- more importantly when the major powers agree that the war has gone far enough, that the risk of a major world war is real -- then ceasefires are imposed.

Domestic constraints also must be taken into account, perhaps to a greater degree in democracies than in totalitarian states. The intense nationalism that supported nineteenth century wars, World War I, and World War II, has declined. Televised wars simply don't appeal to the people at home.

A nation planning to wage a modern conventional war thus must plan to achieve its military objectives fast, before it runs out of tanks, before the cost of the war seriously disrupts its economy, before world opinion

can be mobilized to condemn the aggression or support a ceasefire, before the superpowers decide between themselves that the fighting should end, before the public at home turns off and domestic opposition to the fighting mounts. *Blitzkrieg*, always militarily attractive, has become an economic and political necessity. In recent years we have witnessed several military offensives in which the advancing armies have raced the clock: the Israeli offensive in 1967, the Indian invasion of East Pakistan in 1971, the Egyptian offensive against Israel in 1973, the Israeli counteroffensive in which the last few hours of fighting were crucial, and the Turkish invasion of Cyprus.

Imposed ceasefires, however, do not resolve national conflicts the same way that surrender does. They stop the shooting temporarily, but leave two hostile armies in the field, neither of which is totally exhausted. Even in retreat, these armies may hold on to the notion that a few months or a few years' respite enforced by a ceasefire will suffice to restore their strength, and that they will take to the field again at a future date. And so we have seen a number of repetitive wars between the same sets of adversaries: the four wars between Israel and the Arab countries in 1948, 1956, 1967, and 1973; the three wars between India and Pakistan in 1947, 1965, and 1971; and two periods of fighting in Cyprus in 1963 and 1974.

None of these wars, or rather none of the larger troop engagements that erupted from a lower level of continued hostility, lasted very long. Leaving out anticolonial insurgencies and the war in Vietnam -- because it is a protracted conflict and difficult to fix the date when it began or predict when it may end -- there have been twelve major military conflicts involving two or more nations since World War II. Their average duration was less than six months. The nine conventional military conflicts that have occurred since the Korean War lasted an average of nineteen days. For the most part those wars ended in ceasefires that were encouraged, arranged, or imposed by the major powers.

The present alternatives to a short conventional war are nuclear war, which most nations fortunately still lack the capacity for, and protracted war, such as we see in Indochina. Protracted wars are debilitating military contests in which staying power is more important than firepower. They are "poor men's wars" fought sometimes for generations, necessarily with long periods of military stalemate. The level of fighting peaks and declines with the availability of resources, and often with the seasons. Military victory loses its traditional meaning as strategists debate whether not winning means losing or not losing means winning.

Conventional war and its present alternatives, then, are less and less attractive as a means of settling international disputes. Indeed, in a recent article in *Foreign Affairs*, Louis J. Halle posed the question, "Does war have a future?" He concluded that "the time has probably gone, perhaps forever, when the formal resort to war, duly declared and openly conducted, was an accepted practice among organized societies. . . ." With a few caveats, Halle also concluded that "the day of general wars, directly involving great powers on both sides, may also be past."

I tend to agree with Halle's conclusions even though there have been two conventional wars since the publication of his article: the October 1973 war in the Middle East and the recent conflict in Cyprus. Both of these fit the pattern which I have described. They were short, ceasefires were imposed, and they ended somewhat inconclusively. The probability of renewed fighting -- a fifth round in the Middle East or a third round in Cyprus -- remains high.

In the final paragraph of his article, Halle avoided drawing any overly optimistic inferences from his conclusions. He foresaw the continuation of conflict in forms other than conventional war: guerrilla

* Louis J. Halle, "Does War Have a Future?" *Foreign Affairs*, Vol. 52, October 1973, pp. 20-39.

warfare, incidents and interventions involving the use of armies, the clandestine use of military power, widespread and continual disorder -- what we might indeed still call low-level violence.

Finding modern conventional war an increasingly unattractive mode of conflict, some nation may try to exploit the demonstrated possibilities and greater potential of terrorist groups, and employ them as a means of surrogate warfare against another nation. A government could subsidize an existing terrorist group or create its own band of terrorists to disrupt, cause alarm, and create political and economic instability in another country. It requires only a small investment, certainly far less than what it costs to wage a conventional war; it is debilitating to the enemy, and it is deniable. A number of national governments already provide financial support, weapons, training, and other forms of assistance to groups waging war against other governments because they support their cause. There is little evidence, however, that they actually direct terrorist operations. The concept of surrogate warfare -- sabotage and subversion -- is not new, but the opportunities for destruction and disruption by small groups, as terrorists have demonstrated, are increasing.

In sum, I believe we are going to see more examples of war being waged by groups that do not openly represent the government of a recognized state: revolutionaries, political extremists, lunatics, or criminals professing political aims, those we call terrorists, perhaps the surrogate soldiers of another state; examples of war without declaration; of war without authorization or even admission by any national government; of war without invasions by armies as we know them now; of war without front lines; of war waged without regard to national borders or neutral countries, of war without civilians; of war without innocent bystanders.

THE POLITICAL CONSEQUENCES

Society's new vulnerabilities and the new weapons that may become available to guerrillas and terrorists have greater significance when

they are placed in the political context of our present era in which people seem increasingly unwilling to accept authority, increasingly willing to challenge it. It recalls an earlier period in history, that roughly from 1775 to the mid-nineteenth century, which like our own era, was also a period of defiance marked by widespread revolutions in Europe and in the Americas directed against existing political and social customs. It was a period, not unlike the past two decades, marked by the dissolution of several empires and the creation of many new states.

The similarities between the revolutionaries of this earlier period and the guerrillas and terrorists of our own era -- note how a hundred years can make extremist gunmen into respectable revolutionaries -- are also fascinating. Like many of the young, educated (a characteristic many of them seem to share) members of modern urban guerrilla and terrorist groups, the earlier revolutionaries were romanticists. They were dedicated to causes considered in their time extreme. As romanticists, they had a tendency we again notice now to exult in dramatic, theatrical violence, bloodshed, and death. Their political utopias tended to be vague. And they too cooperated with each other internationally: Europeans came to fight in the American Revolution. An American helped write the new French constitution and American officials in the Spanish colonies were regarded as subversives, which sometimes they were. Englishmen died fighting in the Greek war of independence. Garibaldi fought at the side of rebels in Argentina before launching his own campaign in Italy.

The increasing vulnerabilities in our society plus the increasing capacities for violence afforded by new developments in weaponry mean that smaller and smaller groups have a greater and greater capacity for disruption and destruction. Or, put another way, the small bands of extremists and irreconcilables that have always existed may become an increasingly potent force. This could have profound political consequences. Nations maintain their credentials in the last resort by maintaining their monopoly over the means of violence.

Repression may become an irresistible temptation to national governments trying to protect their own citizens against violence by a small minority and to preserve domestic and international order. Even democratic governments may find themselves compelled to resort to harsh security measures that curtail civil rights. Repression, by itself, will not always work. Governments unable to protect their citizens against violence carried on by small groups, and unable or unwilling to resort to the measures required to stamp them out, may be forced to make tactical concessions. Ultimately they may be compelled to make political accommodations that end the violence.

If the power to destroy becomes more diffuse because of technological developments, political power may also become more diffuse as it must be divided among others who have the power to disrupt and destroy. In the simplest sense this could mean the creation of more nations. Unable to reconcile the competing demands of armed extremists, some nations will come apart and be subdivided into several smaller new nations. This will happen not just because guerrillas or terrorists have acquired modern weapons; it seems to be happening anyway, but the acquisition of modern weapons will accelerate the process in some cases, and cause internal security problems in some nations that otherwise might not have been subjected to centrifugal forces. New weapons may generate new causes or, at least, prevent peaceful resolution of old conflicts.

A breakup of some nations would confirm a long-range historical trend toward smaller national units, a trend that has continued since the dissolution of the major empires which existed in the nineteenth century. Imperial expansion in the second half of the nineteenth century was in part made possible by the vast technological superiority, primarily in weapons, of a few nations. The empires were dissolved in the mid-twentieth century, for the most part peacefully, but, as I mentioned before, significantly after wars in Indochina, Indonesia, and Algeria demonstrated that the alternative to getting out gracefully was a lengthy

and costly colonial war. The breakup of the great empires into smaller national units has continued beyond independence. When the French left Indochina, it was officially three nations; it is now four, and in reality, it is six or seven. British India was one, on independence it became two, and now is three. Malaysia and Singapore were united upon independence; now Singapore is independent.

At its creation in 1945, there were 51 members of the United Nations; by 1960 there were 82; by September 1973 there were 135; there are now 138 nations in the United Nations and about 15 or 20 nations which are not members. Unless there is a renewed trend toward imperialism, or unless the international system is totally reorganized, by the end of the century it would not be surprising to see two hundred or even three hundred politically independent communities in the world, the vast majority of them mini-states.

Much of today's terrorism is carried on in the name of oppressed ethnic minorities -- demanding their own territory or self-rule. Ethnicity seems to be vying with nationality as the legitimate basis for government and representation in the world community. As a result of ethnic pressures, Cyprus and Jordan each may be divided. India, Iran, Iraq, Pakistan, Burma, Indonesia, Yugoslavia, Spain, and Ethiopia to name a few, also face strong centrifugal pressures from dissident ethnic minorities.

The concept of nationhood may itself be changed as international forums such as the United Nations admit the representatives of armed entities which are not nations. We may eventually see two types of representatives in the UN: those of nations in the traditional sense, with boundaries, capital cities, and national armies, and those of groups which are not nations, do not always have a precisely defined national territory, but do have some sort of armed force of their own. The two kinds of political communities may overlap.

The resultant international system is likely to resemble the political complexity of Renaissance Italy in which major kingdoms, minor principalities, tiny states, independent city republics, Papal territories, and

bands of *condottieri* engaged in incessant, but low-level, warfare with one another. Medieval Europe, and India in the seventeenth and eighteenth centuries also come to mind.

The extremists who fight in behalf of political ideologies are not necessarily going to be satisfied by the creation of some new countries. Neither are those who fight for grievances or causes shared only by a handful, or for purely personal motives; they may lack constituencies to sustain them and therefore will remain small and ephemeral, but they too will be capable of greater violence during their brief lifespan.

The world that emerges is an unstable collection of nations, mini-states, autonomous ethnic substates, governments in exile, national liberation fronts, guerrilla groups aspiring to international recognition and legitimacy via violence, and a collection of ephemeral but disruptive terrorist organizations, some of which are linked together in vague alliances, some perhaps the protégés of foreign states. It is a world in which the acronyms of various self-proclaimed revolutionary fronts may take their place in international forums alongside the names of countries. It is a world of formal peace between nations -- free of open warfare except, perhaps, for brief periods -- but of a higher level of political violence, of increased internal insecurity.

I am speaking here of a qualitative change in politically motivated violence, not necessarily a quantitative one. Low-level violence may increase and become more troublesome while conventional wars become fewer and shorter. The overall number of casualties may decline. Indeed, a future world of many Ulsters could turn out to be far less violent in total casualties than the past sixty years during which approximately 23 million soldiers and between 26 and 34 million civilians died in two major wars. When it comes to slaughter, the "civilized" nations of the world can do it on a far grander scale than those we now call "terrorists."

In conclusion, I think it would be silly for us to glibly assume that the consequences of these recent technological developments in

weaponry which greatly increase the individual soldier's capacity for destruction will be confined to the battlefield. The technological developments in individual weaponry are likely to have greater impact off the battlefield where they may be employed against the increasing vulnerabilities of our society, as it becomes more modern, more complex, and more dependent on technology. It would be a gross overstatement to say that anarchism has or will become technologically feasible. But the capacity to disrupt and destroy is becoming more diffuse. The destructive power which, in the past, was possessed only by national armies is descending to the level of small bands, without governments or the necessity of maintaining large sympathetic constituencies which constrain their actions. This could lead to a corresponding diffusion of political power, and perhaps a still greater diffusion of political violence. It suggests a world in which Prince Kropotkin is far more likely to feel at home than Clausewitz or Metternich.